

### III. CLAIM AMENDMENTS

1. (Currently Amended) A rate adaptive system for optical communication networks comprising:

a plurality of optical transceivers capable of transmitting and receiving optical signals at a plurality of rates, and

an optical fibre linked to said optical transceivers,

wherein said system is configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition.

2. (Currently Amended) A The system as claimed in of Claim 1, wherein said error condition is a failure to ~~synchronises~~ synchronize a received signal.

3. (Currently Amended) A The system as claimed in of Claim 1 ~~or 2~~, wherein said system is further configured to calculate an error coefficient based on said received signals, and said error condition ~~is comprises~~ comprises said error coefficient exceeding a predefined range.

4. (Currently Amended) A The system as claimed in any preceding Claim of claim 1, wherein said initial rate is lowered according to predefined percentages of said initial rate in response to said error condition.

5. (Currently Amended) A The system as claimed in of Claim 4, wherein said percentages are selected from the group of 75, 50, and or 25 percent of said initial rate.

6. (Currently Amended) A The system ~~as claimed in any preceding Claim~~of claim 1, wherein said initial rate is 10 Gb/s.

7. (Currently Amended) A The system ~~as claimed in any preceding Claim~~of claim 1, wherein said system is configured to operate in an optical Ethernet network.

8. (Currently Amended) A The system according to any preceding Claim, wherein said system is further configured to notify a network operator in the event of said error condition.

9. (Currently Amended) A rate adaptive method for operating an optical communication network, ~~the method comprising the step of:~~

transmitting data at an initial rate,

receiving said data,

evaluating said data to determine if an error condition exists, and

adapting said rate based upon said evaluation.

10. (Currently Amended) A The method ~~according to~~of Claim 9, wherein ~~said step of~~ adapting said rate comprises lowering said initial rate according to predefined percentages of said initial rate in response to said error condition.

11. (Currently Amended) A The method ~~according to~~of Claim 10, wherein ~~said method comprises the further step of~~further comprising notifying a network operator in the event of said error condition.

12. (Original) An optical transceiver module for a rate adaptive system for optical communication networks comprising:

means for transmitting an optical signal via an optical fibre at a plurality of rates,

means for receiving an optical signal transmitted at a plurality of rates,

means for determining an error condition, and

means for adapting the optical signal transmission rate based upon the error condition.

13. (Currently Amended) A rate adaptive method for operating an optical communication network, ~~the method comprising the step of:~~

transmitting test signals at an initial rate,

receiving said test signals,

evaluating said test signals to determine if an error condition exists, and

adapting said rate based upon said evaluation.